AMENDMENTS

Amendments to the Claims

Please amend the claims according to the following listing of the claims.

Listing of the claims

1 – 22. (Cancelled)

23. (Previously presented) A method of producing a balanced Al-Cu-Mg-Si alloy having a high toughness, good strength levels and an improved fatigue crack growth resistance, comprising the steps of:

a) casting an ingot consisting of the following composition (in weight percent):

Cu: 4.3 – 4.9

Mg: 1.5 – 1.8

Si: 0.10 – 0.40

Cr: ≤ 0.15

$0 < Fe \leq 0.10$,

the balance essentially aluminum and incidental elements and impurities, which are at most 0.05% per element, 0.15% total, wherein the ingot is cast by semi-continuous direct chill (DC) casting,

b) homogenizing and/or pre-heating the ingot after the casting step,

c) hot rolling the homogenized and/or pre-heated ingot and optionally cold rolling into a rolled product,

d) solution heat treating the hot rolled product,

e) quenching the solution heat treated product,

f) stretching the quenched product, and

g) naturally ageing the stretched, rolled and heat-treated product.

24. (Original) Method according to claim 23, wherein, after hot rolling the ingot, annealing and/or reheating the hot rolled ingot and further hot rolling the rolled ingot.

25. (Original) Method according to claim 23, wherein said hot rolled ingot is inter-annealed before and/or during cold rolling.

26. (Original) Method according to claim 23, wherein said rolled and heat-treated product is stretched in a range of up to 3% and naturally aged for more than 10 days.

27. (Original) Method according to claim 23, wherein the rolled and heat-treated product is stretched in a range of 1 to 2%.

28. (Original) Method according to claim 23, wherein the rolled and heat-treated product is, after stretching, naturally aged for a period in a range of 10 to 20 days.

29. (Original) Method according to claim 23, wherein the alloy product has been processed to an alloy product in a T3 or T351 temper condition.

30. (Original) Method according to claim 23, wherein the alloy product has been processed to a sheet product having a final thickness in a range of 2.0 to 12 mm.

31. (Original) Method according to claim 23, wherein the alloy product has been processed to a sheet product having a final thickness in a range of 25 to 50 mm.

32. (Original) Method according to claim 23, wherein the alloy product has been processed to a structural member of an aircraft or spaceship.

33. (Original) Method according to claim 23, wherein the alloy product has been processed to a fuselage skin of an aircraft.

34. (Original) Method according to claim 23, wherein the alloy product has been processed to a lower-wing member of an aircraft.

35 – 37. (Cancelled)

38. (Previously Presented) Method according to claim 23, wherein the amount (in weight %) of Cu in the alloy is in a range of 4.3 to 4.6%.

39. (Previously Presented) Method according to claim 23, wherein the amount (in weight %) of Cu in the alloy is in a range of 4.4 to 4.5%

40. (Previously Presented) Method according to claim 23, wherein the amount (in weight %) of Mg in the alloy is in a range of 1.5 to 1.7% and the amount (in weight %) of Cu in the alloy is in a range of 4.4 – 4.9.

41. (Original) Method according to claim 23, wherein the amount (in weight %) of Mg in the alloy is in a range of 1.5 to 1.7%.

42. (Original) Method according to claim 23, wherein the amount (in weight %) of Si in the alloy is in a range of 0.15 to 0.35 %.

43. (Original) Method according to claim 23, wherein the amount (in weight %) of Si in the alloy is in a range of 0.23 to 0.30%.

44. (Original) Method according to claim 23, wherein the amount (in weight %) of Si in the alloy is in a range of 0.23 to 0.28%.

45. (Cancelled)

46. (Original) Method according to claim 23, wherein the alloy product has been processed to a product having a fatigue crack growth rate of less than 0.001 mm/cycles at $\Delta K=20$ MPa$\sqrt{m}$ when tested according to ASTM-E647 on 80 mm wide M(T) panels at R=0.1 at constant load and at a frequency of 8 Hz.

47. (Original) Method according to claim 23, wherein the alloy product has been processed to a product having a fatigue crack growth rate of less than 0.01 mm/cycles at $\Delta K=20$ MPa$\sqrt{m}$ when tested according to ASTM-E647 on 80 mm wide M(T) panels at R=0.1 at constant load and at a frequency of 8 Hz.

48. (Original) Method according to claim 23, wherein the alloy product has been processed to a product having a tensile yield strength of not less than 310 MPa in the L-direction.

49. (Original) Method according to claim 23, wherein the alloy product has been processed to a product having an ultimate tensile strength in the L-direction of not less than 430 MPa.

50. (Previously Presented) Method according to claim 23, wherein the amount of Fe in the alloy is 0.06 – 0.10%.

51. (Cancelled)

52. (Previously Presented) Method according to claim 23, wherein the amount of Mn is 0.

53. (Previously Presented) Method according to claim 23, wherein the amount of Fe in the alloy is 0.06 – 0.10% and the amount of Mn is 0.

54. (Previously Presented) Method according to claim 23, wherein the amount of Mg in the alloy is 1.68 – 1.8%.

55. (Cancelled)

56. (Previously Presented) Method according to claim 23, wherein in the alloy the amount of Cu is 4.3 to 4.5%, the amount of Mn is 0, the amount of Mg is 1.6 to 1.7%, the amount of Si is 0.23 to 0.30 %, and the amount of Fe is 0.06 – 0.10%.

57. (Previously Presented) Method according to claim 23, wherein in the alloy the amount of Cu is 4.3 to 4.5%, the amount of Mn is 0, the amount of Mg is 1.6 – 1.7%, the amount of Si is 0.10 to 0.25 %, and the amount of Fe is 0.06 – 0.10%.

58. (Previously Presented) Method according to claim 56, wherein in the alloy the amount of Cu is 4.4 to 4.5%, the amount of Mn is 0, the amount of Mg is 1.6 to 1.7%, the amount of Si is 0.23 to 0.30 %, and the amount of Fe is 0.06 – 0.10%,

wherein the alloy product has been processed to a product having:

a fatigue crack growth rate of less than 0.01 mm/cycles at ΔK=20 MPa$\sqrt{m}$ when tested according to ASTM-E647 on 80 mm wide M(T) panels at R=0.1 at constant load and at a frequency of 8 Hz;

a tensile yield strength of not less than 310 MPa in the L-direction; and

an ultimate tensile strength in the L-direction of not less than 430 MPa,

wherein the alloy product has been processed to an alloy product in a T3 or T351 temper condition.

59. (Previously Presented) Method according to claim 23, wherein the alloy consists of 4.3 to 4.5% Cu, 1.6 to 1.7% Mg, 0.23 to 0.30 % Si, and 0.06 – 0.10% Fe, the balance essentially aluminum and incidental elements and impurities, which are at most 0.05% per element, 0.15% total.

60. (Cancelled)

61. (Previously Presented) Method according to claim 23, wherein the amount of Mg in the alloy is 1.68 – 1.8% and amount of Cu is 4.4 – 4.9.